AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A computer-implemented method of generating optimized platform location sets locations for extracting hydrocarbons from underground reservoirs, comprising:

computing a maximum number of targets to be assigned for each of a user-specified number of platforms by determining the product of a user-specified number of slots and a user-specified number of targets per slot;

selecting a possible set of platform locations from at least one of a number of X and Y coordinates from automatically generated target locations, a user-specified number of platform locations, or a generated grid of evenly spaced platform locations;

validating the set of possible platform locations to determine that each possible platform location in the set is in a geographically valid area by comparing each possible platform location against a set of exclusionary polygons;

determining a best set of platform locations from the set of possible platform locations by an iterative process which adds each of the possible platform locations to a list comprising the user-specified number of platforms and determining if the inclusion of each one of the possible platform locations in the list causes the total set of platforms to reach ~~at least one of:~~ more targets or the same number of targets with less total distance thereby returning locations that are most desirable; and

optimizing each platform location in the best set of platform locations by an iterative process which determines whether an improvement is achieved by moving each of the platform locations within a fraction of a platform reach in eight compass directions around a current selected best platform location.

2-4. (Canceled)

5. (Previously presented) The method of claim 1, wherein optimizing each platform location includes:

(a) setting an initial step-out distance equal to the fraction of the platform reach;

(b) selecting a potential new platform location located the step-out distance from the original platform location in one of the eight compass directions;

(c) validating the potential new platform location;

(d) computing at least one of the number of targets that could be reached from the potential new platform location or the total drilling distance to reach all the targets to be reached from the potential new platform location;

(e) comparing the computed number of targets that could be reached from the potential new platform location or the total drilling distance to reach all the targets to be reached from the potential new platform location against the values at the original platform location;

(f) determining that the potential new platform location is better than the original location based on at least one of the following: more targets may be reached from the potential new platform location than from the original platform location and the same number of targets may be reached from the potential new platform location with less drilling distance than from the original platform location;

(g) moving the original platform location to the potential new platform location; and

(h) executing steps (b) to (g) for other compass directions; and

(i) executing steps (b) through (h) by progressively decreasing the step-out distance until a more desirable platform location is no longer achieved.

6. (Previously presented) The method of claims 5, wherein the initial step-out distance is reduced by a predetermined amount for each execution of step (i).

7. (Currently amended) A computer-readable medium having computer-executable instructions which when executed on a computer perform a process for generating optimized

platform locations for extracting hydrocarbons from underground reservoirs, the process comprising:

computing a maximum number of targets to be assigned for each of a user-specified number of platforms by determining the product of a user-specified number of slots and a user-specified number of targets per slot;

selecting a possible set of platform locations from at least one of a number of X and Y coordinates from automatically generated target locations, a user-specified number of platform locations, or a generated grid of evenly spaced platform locations;

validating the set of possible platform locations to determine that each possible platform location in the set is in a geographically valid area by comparing each possible platform location against a set of exclusionary polygons;

determining a best set of platform locations from the set of possible platform locations by an iterative process which adds each of the possible platform locations to a list comprising the user-specified number of platforms and determining if the inclusion of each one of the possible platform locations in the list causes the total set of platforms to reach ~~at least one of:~~ more targets or the same number of targets with less total distance; and

optimizing each platform location in the best set of platform locations by an iterative process which determines whether an improvement is achieved by moving each of the platform locations within a fraction of a platform reach in eight compass directions around a current selected best platform location.

8- 10. (Canceled)

11. (Previously presented) The computer-readable medium of claim 7, wherein optimizing each platform location includes:

(a) setting an initial step-out distance equal to the fraction of the platform reach;

(b) selecting a potential new platform location located the step-out distance from the original platform location in one of the eight compass directions;

(c) validating the potential new platform location;

(d) computing at least one of the number of targets that could be reached from the potential new platform location or the total drilling distance to reach all the targets to be reached from the potential new platform location;

(e) comparing the computed number of targets that could be reached from the potential new platform location or the total drilling distance to reach all the targets to be reached from the potential new platform location against the values at the original platform location;

(f) determining that the potential new platform location is better than the original location based on at least one of the following: more targets may be reached from the potential new platform location than from the original platform location and the same number of targets may be reached from the potential new platform location with less drilling distance than from the original platform location;

(g) moving the original platform location to the potential new platform location;

(h) executing steps (b) to (g) for other compass directions; and

(i) executing steps (b) through (h) by progressively decreasing the step-out distance until a more desirable platform location is no longer achieved.

12. (Currently Amended) The computer-readable medium of claim 11, wherein the initial step-out distance is reduced by a predetermined amount for each execution of step (i).

13- 18. (Canceled)